

CLAIMS

1. A roller for a continuously variable ratio device ("variator") of the full toroidal type in which a pair of races mounted for rotation about a common axis together define a substantially toroidal cavity and the roller is disposed in the cavity and runs upon the races to transfer drive between them, the roller having an outer perimeter which, viewed in a sectional plane containing the roller axis, has a convex profile and which is not symmetrical about any plane perpendicular to the roller axis.
2. A roller as claimed in claim 1 wherein the largest diameter of the roller crown is offset from the mid point of the crown.
3. A roller as claimed in claim 1 or claim 2 wherein the roller crown, viewed in the aforementioned sectional plane, is an arc of a notional circle whose centre is offset from the centre plane, defined as the plane perpendicular to the roller axis containing the mid point of the crown.
4. A variator comprising a roller as claimed in any preceding claim, the variator further comprising a pair of races mounted for rotation about a common axis and together defining a substantially toroidal cavity, the roller being disposed in the cavity and running upon the races to transfer drive between them.

5. A variator as claimed in claim 4 wherein the largest diameter of the roller crown is displaced from the mid point of the crown in a direction toward the variator axis.
6. A variator as claimed in claim 4 or claim 5 wherein the regions of engagement between the roller and the races are centred upon the crown of the roller despite the roller centre being offset in operation from the centre line of the toroidal cavity.
7. A variator as claimed in any preceding claim wherein the roller is provided with mountings which permit it to float along a direction which is radial with respect to the common axis of the races, the roller's radial position being determined by the action of the races upon it.
8. A variator roller substantially as herein described with reference to and as illustrated in accompanying Figure 3.
9. A variator substantially as herein described with reference to and as illustrated in accompanying Figures 2 and 3.